

ABSTRACT

A method and apparatus of assessment of relative changes in the cross sectional area of a limb artery. The method includes applying to the artery an external pressure, which causes
5 the cross-sectional area of the artery to change between systole and diastole much more than if the pressure is not applied, determining, over one or more cardiac cycles, a baseline value for a parameter related to the cross-sectional area of the artery, while the pressure is applied, applying a stimulus to the artery, determining, over one or more cardiac cycles, a stimulus-affected value for the parameter related to the cross-sectional area of the artery, while the
10 pressure is applied and while the artery is in a dilated state affected by the stimulus and evaluating the artery based on a comparison of the determined stimulus-affected and baseline values, the baseline value is determined while the artery is substantially not affected by the stimulus.